The figure below shows a simple DC circuit where R_L is a fixed resistor, V_S is a DC voltage source (V_S=10V), R_1 and R_2 are variable resistors, V is a voltmeter, and A is an ammeter. If needed, more information on electricity can be found
e.g. https://openpress.usask.ca/physics155/chapter/6-2-resistors-in-series-and-parallel/.
At the beginning (t_1=0s) the resistances are R_1=0Ω and R_2=100kΩ. These two resistances change linearly so that after 10 seconds (t_2=10s) they are R_1=100kΩ and R_2 = 0Ω.

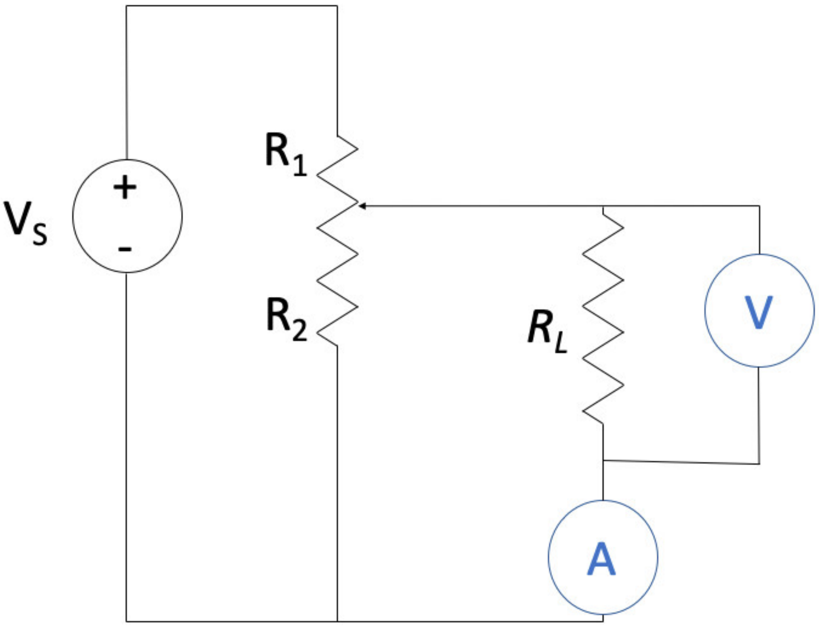
Write a class for simulating this circuit in real time and implement methods for
- starting and restarting the simulation
- providing the actual values of the voltmeter (V) and the ammeter (A) with a timestamp during the simulation between the period t_1 and t_2 assuming that R_L=30kΩ.

Write separate class(es) for representing a voltmeter and an ammeter devices which read and print the corresponding values from the circuit simulator object at regular intervals. Set this regular interval to 100ms for the voltmeter and 300ms for the ammeter objects. Implement a method for providing the last measured value with its timestamp.

Write an additional class for ohmmeter calculating the resistance R_L, which registers itself in the voltmeter and ammeter device objects and receives updates from them whenever their respective measured values are changing. At regular intervals, print the calculated value of R_L based on the last received voltage and current values. Set this regular interval to 1s.
Also implement a derived ohmmeter class which calculates R_L with rolling average and considers all the values received during the last 2 seconds.

Write then an application with a circuit simulation object, the voltmeter and ammeter device objects as well as single instances of both ohmmeter classes all connected. The application shall start the simulation and quit after 10 seconds.

You can decide the exact formatting of the printouts. For the implementation of the application, you can use either **Python** (Python>=3.6, NO external libraries) or **Javascript** (ECMAScript 6, NO external libraries) and use asynchronous execution features of the language (e.g. async, await, etc.).... Please try to spend no more than three hours with the implementation.


V_S
+
-
R_1
R_2
R_L
V
A